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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION N
10/707,561	12/22/2003	Mu-Jung Wu	LKSP0034USA	1560
27765	7590	10/18/2004	EXAMINER	
NAIPO (NORTH AMERICA INTERNATIONAL PATENT OFFICE)			NGUYEN, DUNG V	
P.O. BOX 506			ART UNIT	PAPER NUMBER
MERRIFIELD, VA 22116			3723	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/707,561	WU ET AL.	
	Examiner	Art Unit	
	Dung V Nguyen	3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/27/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (USPN 6,257,966) in view of Togawa et al (USPN 6,319,105).

Ishikawa et al discloses a wafer grinding apparatus 10 comprising a wafer-transporting device 28 for transporting a wafer 26, a suction pad 35 having a first surface and a second surface, the second surface being flexible for sucking the wafer 26, a transporting mechanism connected to the first surface of the suction pad for transporting the wafer 26, an air intake line, an air suction device connected to the air intake line for pumping air, wherein the suction pad 35 comprises a pedestal positioned on the transport mechanism and contains an opening connected to an end of the air intake line, a first table and a second table for situating the wafer 26, wherein the wafer-transporting device 28 is utilized for moving the wafer 26 from the first table to the second table, a parking region 22 for parking the suction pad 35, wherein the first table is selected from a group consisting of a positioning table 16, a grinding table 50, and a cassette table 14, wherein the second table is selected from a group consisting of a positioning table 16, a grinding table 50, and a cassette table 14 (note Fig. 1-3, col. 3, line 50 to col. 6, line 2). However, Ishikawa does not disclose a first nozzle for ejecting

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a liquid to the first surface of the suction pad for cleaning the first surface, a second nozzle for ejecting a liquid to the second surface of the suction pad and wafer for cleaning the second surface and the wafer. Togawa et al discloses a first nozzle 42 for ejecting a first liquid to the first surface of the suction pad and a second nozzle 44 for ejecting a second liquid to the second surface of the suction pad and wafer for cleaning the second surface and the wafer, wherein the second nozzle 44 comprises a spray nozzle, wherein the first and second liquid comprises water (note Fig. 1-3, abstract, col. 2, lines 17-46, col. 3, line 30 to col. 4, line 15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the wafer grinding apparatus of Ishikawa et al the cleaning device including the first and second nozzles of Togawa et al in order to obtain high quality polishing by minimizing surface damage caused by contaminants originating from the suction pad.

3. Claims 4-9 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishikawa et al (USPN 6,257,966) in view of Togawa et al (USPN 6,319,105) as applied to claims 1-3 above. Ishikawa et al modified by Togawa does not disclose expressly a flexible suction tray, a plurality of equally spaced flexible suction trays, elastic ring and transport mechanism comprises a T-shaped arm. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to include a flexible suction tray, a plurality of equally spaced flexible suction trays, elastic ring or a T-shaped arm because Applicant has not disclosed that a flexible suction tray, a plurality of equally spaced flexible suction trays, elastic ring and T-shaped arm provides an advantage, is used for a particular purpose,

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or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a suction pad or a flexible suction tray, a plurality of equally spaced flexible suction trays, elastic ring because the suction pad or a flexible suction tray, a plurality of equally spaced flexible suction trays, elastic ring performs the same function of supporting the wafer when the wafer is sucked by vacuum suction and a T-shaped arm performs the same function of transporting a wafer between the tables. Therefore, it would have been an obvious matter of design choice to modify to obtain the invention as specified in claims 4-9.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hirata, Yoshida et al and Wada et al are cited to show wafer grinding apparatus having cleaning device.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung V Nguyen whose telephone number is 703-305-0036. The examiner can normally be reached on M-F, 6:30-3:00.

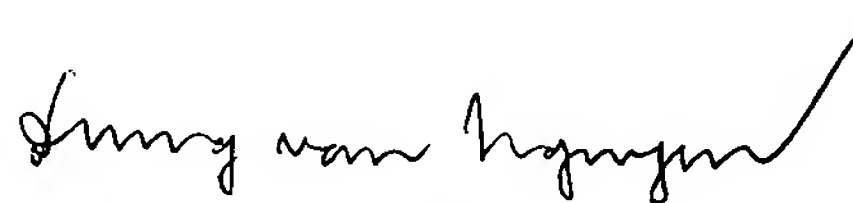
6. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on 703-308-2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DVN

October 15, 2004



DUNG VAN NGUYEN
PRIMARY EXAMINER